

Search EIA:

by 

Page Links


[Printer-Friendly Version](#), [PDF Version](#), [PDA Version](#)
[General Background](#)[Energy Overview](#)[Oil](#)[Natural Gas](#)[Coal](#)[Electricity](#)[Profile](#)[Links](#)[Mailing Lists](#)

May 2001

Puerto Rico Fact Sheet

The U.S. Commonwealth of Puerto Rico is located in the Caribbean Sea, about 1,000 miles southeast of Miami, along a key shipping lane to the Panama Canal. Puerto Rico relies on imports (mainly petroleum, with liquefied natural gas and coal recently diversifying its energy mix) for nearly all of its energy needs.

Note: Information contained in this report is the best available as of May 2001 and is subject to change.



GENERAL BACKGROUND

Puerto Rico is comprised of the main island, plus two smaller islands (Vieques and Culebra), and numerous smaller islets. Puerto Rico's economy is highly integrated with that of the mainland United States. If Puerto Rico were not part of the United States, it would represent the 10th largest trading partner. Politically, residents of Puerto Rico are U.S. citizens but do not vote in Presidential elections.

They are represented in the U.S.

House of Representatives by a Resident Commissioner whose voting is limited to committee actions. Puerto Rico's political status is an ongoing issue. In a December 1998 referendum, a majority of the island's predominantly Spanish-speaking electorate rejected plans to opt for United States statehood. Other options -- including full independence -- were even less popular, effectively leaving intact the island's "commonwealth" status. Sila Maria Calderon was elected governor in 2000, and took office in January 2001. Her Popular Democratic Party, which supports the present "commonwealth" status of Puerto Rico, gained control of the legislature in the November 2000 election.

Much of the manufacturing investment in Puerto Rico was stimulated by the tax advantages of Section 936 of the U.S. Tax Code, which was eliminated in 1996. Since then, Puerto Rico has lost some manufacturing jobs. However, another provision, Section 30-A of the U.S. tax code, is under consideration for an extension in the U.S. Congress. This provision offers a wage credit and other tax benefits for U.S. firms operating in Puerto Rico. Multinationals can already designate themselves as "Controlled Foreign Corporations," which means that profits not remitted to U.S. parent or subsidiary companies are not federally taxed. The Free Trade Area of the Americas, proposed for creation in 2005, is regarded by Puerto Rico as both a challenge and an opportunity. The island would face competition for markets in the mainland United States from other nations in the free trade area, many of which could be more competitive because of lower production costs.

Though Puerto Rico's real GDP growth was not as high in 2000 as 1998 and 1999, the economy overall was

solid in 2000 (3.6% GDP growth), with exports growing by 10.2% in FY2000 and the unemployment rate finally coming down somewhat (from 13.5% in 1998 to 11% in 2000). The Puerto Rican Treasury Department, however, reports that fiscal revenue is likely to fall short of projections for FY 2001, increasing public debt. The use of much of the island of Vieques as a target range for the U.S. Navy continues to be a source of friction.

ENERGY OVERVIEW

Oil is the dominant fuel in Puerto Rico's energy mix, accounting for 97.7% of total primary energy consumption (0.35 quadrillion Btu) in 1999. Puerto Rico lacks domestic hydrocarbon reserves and relies on imports for nearly all of its energy requirements, except for a small hydropower generating potential. Per capita energy consumption is much lower than in the mainland United States (91 million Btu versus 347 million Btu for the United States as a whole in 1999).

OIL

Puerto Rico consumed about 164,000 barrels per day (bbl/d) of petroleum products in 2000, all from imports, and mostly for transportation and electric power generation. It also exported about 11,000 bbl/d of petroleum products to the United States in the beginning of 2001. As of January 1, 2000, Puerto Rico's refining capacity stood at 49,000 bbl/d, all from its Caribbean Petroleum Corporation refinery at Bayamon, northern Puerto Rico, which reopened in February 1999. Caribbean Petroleum has requested foreign trade zone status for the facility to make it more competitive for re-export. Sunoco plans to permanently close its 35,000-bbl/d Yabucoa, Puerto Rico refinery in May 2001, though efforts continue to sell the facility. The island also has petroleum storage at its Proterm facility, with a capacity of about 9 million barrels. In January 2001, Caribbean Petroleum Corp., MetLife Capital Corporation, and Water Quality Insurance Syndicate reached a settlement with the U.S. Federal Government and the Government of the Commonwealth of Puerto Rico to pay \$83.5 million to settle claims resulting from environmental damage caused by a 1994, 800,000-gallon oil spill.

NATURAL GAS

Puerto Rico began to import liquefied natural gas (LNG) from the Atlantic liquefaction facility of Trinidad in August 2000 to the new EcoElectrica regasification facility at Punta Guayanilla, Penuelas, near the city of Ponce. The project has a 1-million-barrel LNG storage tank (equivalent to approximately 3.6 billion cubic feet {Bcf} of natural gas) with two vaporizers. It will receive 9 cargoes per year from Cabot LNG Shipping LLC's 33-million gallon carrier under a 20-year contract. The EcoElectrica regasification facility (and accompanying gas-fired power plant) are operated and managed by Enron, which owns 50% of the facilities. Edison Mission of California owns the other 50%, contracting management and operation to Enron. Enron and Sask Energy of Canada have submitted proposals to the Government of Puerto Rico to build a 16-mile natural gas pipeline from Guayanilla to thermal power plants operated by the Puerto Rico Electric Power Authority (PREPA). The plants would be converted to use natural gas to take advantage of the pipeline. Repsol-YPF of Spain is also in talks with the Government of Puerto Rico in regards to supplying LNG.

COAL

Puerto Rico consumes 190,000 short tons of coal annually (based on 1999 data), all of which is imported. A 454-MW, coal-fired plant under construction in Guayama (see below), will increase the use of coal when it comes on-line in mid-2002.

ELECTRICITY

PREPA generates 98% of the island's electricity, and is the sole distributor of electric power on the island, with about 4.397 gigawatts (GW) of installed capacity in 2000. PREPA is among the 20 largest electric utilities in the United States. (PREPA is known as Autoridad de Energia Electrica (AEE) in Spanish.) In 1999, about 16.76 billion kilowatt-hours (Bkwh) of electricity was generated in Puerto Rico, nearly all from oil-fired generators. Just 300 million kwh came from small



EcoElectrica Facility - Source: Edison Mission

hydroelectric dams. PREPA also purchases excess power generation from cogenerators, primarily in the cement industry. Because PREPA functions in geographic isolation and the island is often subject to hurricanes, in February 1999, the utility began installing a geographic information system (GIS), a work management system (WMS), and an outage management system (OMS) that will automate and streamline system repairs and enable PREPA to manage electric transmission and distribution lines more effectively. Intergraph Corp. is creating and implementing the GIS and OMS, and Severn Trent Systems is creating and implementing the WMS. These systems depend on a facilities inventory, which is expected to be completed in 2002. ESCO Technologies of Missouri was awarded a contract to its Distribution Control Systems Inc. (DCSI) subsidiary by PREPA in December 2000, to complete Puerto Rico's island-wide implementation of Automatic Meter Reading (AMR) for \$50 million.

Both PREPA and private power producers are investing in new capacity to meet growing demand. Fearing a power deficit in the next five years caused by expansion of the economy, Puerto Rico is depending on investments of \$1.9 billion to provide adequate electricity. Demand is growing about 3.5% per year, which will necessitate more power. Several plants are under construction and will be commissioned by 2002, adding significantly to the generating capacity of PREPA. Additional power is also being provided through the refurbishing of some of the company's power stations. The 248-megawatt (MW) Cambalache station combustion turbine plant opened at Arecibo in 1998. PREPA, with 1.6 million clients, recently decided not to build any more power stations, but to seek co-generation agreements through supply contracts with independent power producers. Cogeneration contracts are advantageous to PREPA as it will not have to find the money to build a plant.

One of the most important new power plants in Puerto Rico is the EcoElectrica facility, a \$600-million, 507-MW, gas-fired combined-cycle cogeneration in Penuelas. EcoElectrica is one of the cleanest power plants in the world, exceeding both U.S. and World Bank environmental standards. The plant, the world's first independent, private combined LNG terminal/combined cycle gas turbine power project, was built by Enron. It came on-line in March 2000 using condensate, and received its first shipment of LNG in August 2000. In January 1999, Edison Mission Energy acquired a 50% stake from Kennetech, for \$245 million. Enron owns the other 50%. This project, which is capable of supplying about 20% of the island's electricity, is a key factor in the fuel diversity efforts of PREPA, which is heavily dependent on old, oil-fired generating units. This dependence on oil-fired units translated into a 70% increase in electricity rates in fiscal year 2000 as a result of increases in the price of oil. Another effort at fuel diversity is the \$815-million, 454-MW coal-fired plant under construction by AES Corporation of Virginia. Financing was completed in June 2000. The Aurora plant in Guayama will provide electricity under a 25-year power purchase agreement with PREPA. It is scheduled to begin operations in mid 2002, and will provide 9% of Puerto Rico's existing capacity and 15% of existing demand. In addition, PREPA will sell up to 400,000 pounds per hour of steam to Phillips Petroleum Co. of Puerto Rico. PREPA is also investing \$220 million to repower some of its older power stations in San Juan. Two small generators with combined output of 88 MW, and which have ended their lifespans, are being rehabilitated to a rated capacity of 464 MW, with possible completion by the end of 2001. With all these projects, PREPA does not expect to need to increase its capacity until 2007. If demand increases beyond projected levels before then, PREPA would repower other aging stations.

Renewable Energy

Since 1982, the U.S. Department of Energy (DOE) has funded numerous small renewable energy research and development (R&D) projects in Puerto Rico, including research of sugar cane as a possible source of biomass power. In 1994, the DOE grant "Particles, Processes and Materials for Modern Energy Needs; Development of a DOE-EPSCoR Project in Puerto Rico" was initiated. DOE-EPSCoR is composed of three research clusters, including High Energy Particle Physics, Optoelectronic Materials, and Catalytic Processes in Energy Sources and Environmental Detoxification.

One of the first non-incineration waste-to-energy power plants in the United States will be constructed by Interstate General Company's (Virginia) Puerto Rico subsidiary, Caribe Waste Technologies (CWT), in Caguas. CWT is the managing partner in a consortium that includes Thermoselect (Switzerland), Raytheon, and Baltimore Gas and Electric Co. subsidiary Constellation Energy, which will be the operator. The Government of the Commonwealth of Puerto Rico approved enabling legislation for the facility in August

2000, and construction will begin when U.S. Environmental Protection Agency approval and other permits are granted. CWT has a target date of November 2001 for starting construction. The \$450-million trash-converting plant will use a gasification process that will break down approximately 1.1 million tons of waste per year into basic elements and electricity.

Environment

Puerto Rico's 1999 energy-related carbon emissions totaled 6.01 million metric tons. On a per capita basis, Puerto Rico's emissions are about one-third as great as emissions for the United States as a whole (1.55 metric tons per person, compared with 5.47 metric tons per person for the United States). Puerto Rico's long-term energy policy emphasizes environmental safety, energy conservation and consumer education, diversification of energy sources, and transportation initiatives to reduce energy demand. As part of this policy focus, a metrorail system is under construction in metropolitan San Juan. Another example of long-term environmental sustainability is the planned RENOVA Resource Recovery facility and eco-industrial park. RENOVA would process one-sixth of the municipal waste in Puerto Rico, and the energy, metals, and construction materials generated would be used by adjacent industries. Total waste for the complex would approach zero.

PUERTO RICO OVERVIEW

Governor: Sila Maria Calderon

Resident Commissioner/Representative to U.S. House of Representatives: Anibal Acevedo Vila

Population (2000E): 3.92 million

Area: 3,500 square miles (almost three times the size of Rhode Island)

Capital: San Juan

Ports: San Juan, Guanica, Punta Guayanilla, Guayama, Playa de Ponce

Languages: Spanish, English

Currency: U.S. Dollar

Gross National Product (GNP, 2000E): \$41.53 billion

Per Capita GDP (2000E): \$10,700

Real GNP Growth Rate (2000E): 3.15% (2001F) 2.4%

Inflation rate (2000E): 5.7%

Unemployment rate (2000): 11%

Major Industries: pharmaceuticals, electronics, apparel, food, instruments, cement, tourism

Exports Outside the United States (2000): \$4.69 billion

Major Export Markets Outside the United States: Dominican Republic, Japan, Panama

Sources for this report include: BMI Latin America Monitor; CIA World Factbook 2000; Dow Jones News wire service; Economist Intelligence Unit ViewsWire; Financial Times; DRI McGraw-Hill Companies, Global Power Report; International Market Insight Reports; Interstate General Company; Latin American Energy Alert; Latin American Power Watch; Oil and Gas Journal; Oil Daily; Petroleum Economist; U.S. Department of Commerce, International Trade Administration; U.S. Energy Information Administration; WEFA Latin America Economic Outlook.

Links

For more information from EIA on Puerto Rico, please see:

[EIA - Country Information on Puerto Rico](#)

Links to other U.S. Government sites:

[2000 CIA World Factbook - Puerto Rico](#)

The following links are provided solely as a service to our customers and therefore should not be construed as advocating or reflecting any position of the Energy Information Administration (EIA) or the United States Government. In addition, EIA does not guarantee the content or accuracy of any information presented in linked sites.

[Institute for Puerto Rican Policy](#)

[National Science Foundation, Science and Engineering Profile on Puerto Rico](#) (requires Acrobat Reader, which can be downloaded from [here](#))

[Economic Development Administration of Puerto Rico](#)

[Welcome to Puerto Rico's DOE EPSCoR Program](#)

[Puerto Rico -- Government overview](#)

[Renewable Energy in Latin America and the Caribbean](#)

[CARILEC -- The Association of Electric Utilities in the Caribbean area](#)

[Caribbean Online](#)

[CARICOM - The Caribbean Community](#)

[The Organization of American States](#)

[Official Home Page of the Free Trade Area of the Americas](#)

[Puerto Rico Industrial Development Company \(PRIDCO\)](#)

[Other Puerto Rico Links](#)

[Latin World section on Puerto Rico](#)

[Lanic section on Puerto Rico](#)

If you liked this Country Analysis Brief or any of our many other Country Analysis Briefs, you can be automatically notified via e-mail of updates. Simply click [here](#), select "international" and the specific list(s) you would like to join, and follow the instructions. You will then be notified within an hour of any updates to our Country Analysis Briefs.

[Return to Country Analysis Briefs home page](#)

File last modified: May 9, 2001

Contact:

Tara Billingsley
tara.billingsley@eia.doe.gov
Phone: (202)586-0172
Fax: (202)586-9753

URL: <http://www.eia.doe.gov/cabs/prico.html>

If you are having technical problems with this site, please contact the EIA Webmaster at wmaster@eia.doe.gov